Public Health Watch

Metro Public Health Dept
Nashville/Davidson County

A BI-MONTHLY PUBLIC HEALTH NEWSLETTER OF THE METRO PUBLIC HEALTH DEPARTMENT

ISSN - 1009 - 7423

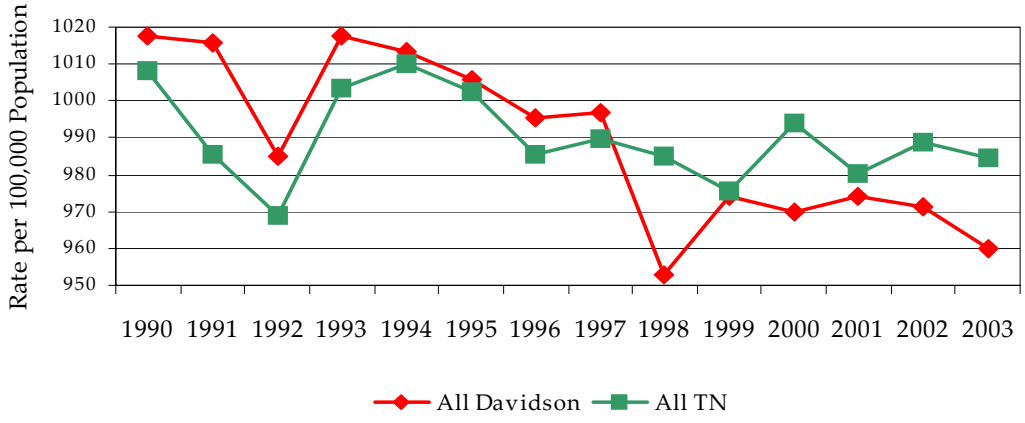
Volume 9, Number 2 November/December 2005

Editor's Note:
The Mortality Report for 2003 is scheduled for release later this year. The report will be available on the Metro Public Health Department 's (MPHD) website or may be obtained by request from the MPHD's Division of Epidemiology.

Selected Highlights: 2003 Mortality Report for Davidson County

Burns Rogers, Ph.D., Brook McKelvey, M.A., M.P.H.
Division of Epidemiology

Figure 1. Age-Adjusted Death Rates for All Causes, Davidson County and Tennessee, 1990-2003



Deaths by Sex, Race, and Age

In 2003, there were 5,187 deaths among Davidson County residents. Of these, 2,533 or 48.8% were males and 2,654 or 51.2% were female. Nearly three-fourths of the deaths were White (74.6%) while 24.8% were Black, and less than 1.0% were of another race or unidentified. Nearly 69% of all deaths among Davidson County residents were persons aged 65 and older. Nearly 41% of males died before age 65 compared to just 23% of females.

Death Rates by Sex and Race

The 2003 crude death rate (number of deaths per 100,000 population) in Davidson County was 890.5 overall; 893.0 for males and 888.2 for females; 955.7 for Whites and 818.4 for Blacks. When stratified by sex and race, White females had the highest death rate (980.8), while Black females had the lowest death rate (747.7).

continued on page two

In This Issue

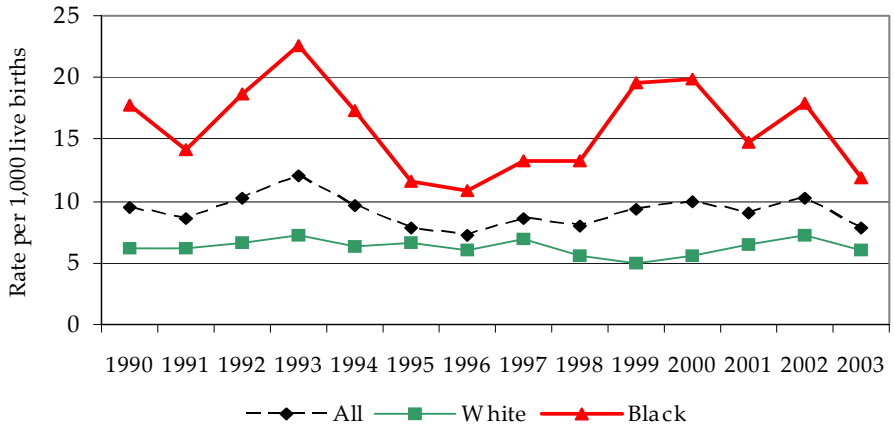
Infant Mortality

There were 69 deaths among children less than one year old in Davidson County in 2003. The infant mortality rate (infant deaths per 1,000 live births) was 6.0 for Whites and 11.9 for Blacks. Black infants died at a rate that was twice as high as the rate for Whites. The overall infant mortality rate (7.8) in 2003 was 24.3% lower than the rate in 2002.

Comparison with Tennessee and United States

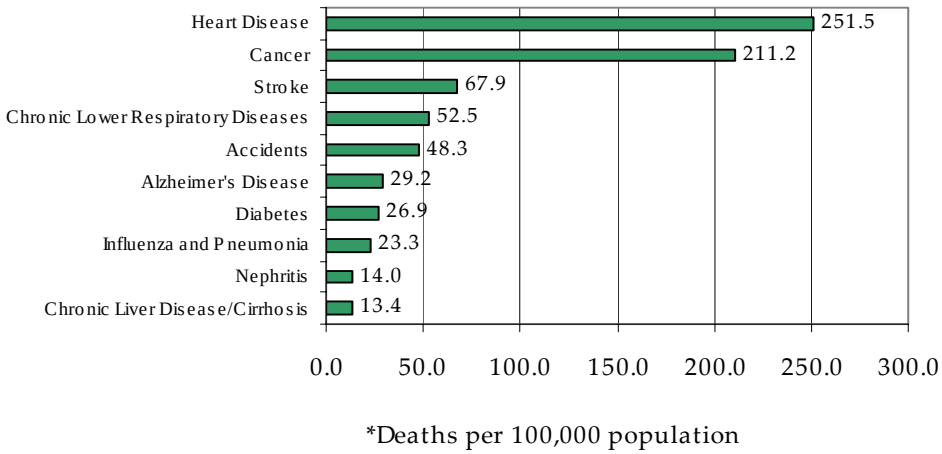
In 2003, the age-adjusted death rate for all causes in Davidson County was lower (2.6%) than the corresponding rate for Tennessee. Similarly, when age-adjusted rates for sex and racial categories were compared, Davidson County rates were lower than Tennessee rates with the exceptions of the death rates for all Blacks and Black males. Compared to the rates for all of the United States, the age-adjusted death rate for Davidson County as a whole and for each race and sex category were substantially higher. The age-adjusted rate for stroke in Davidson County was comparable to the Tennessee rate. The county rates for Alzheimer's disease, influenza and pneumonia, accidents, chronic lower respiratory diseases, heart disease, cancer, and diabetes were all lower than the rates for the state. The age-adjusted death rates for nine of the ten leading causes of death in Davidson County were higher than the comparable rates for the United States; the one exception was nephritis. For the 6 leading causes of death and infant mortality for which there is a corresponding Healthy People 2010 objective, the Davidson County rates fall short of the objective goals with the exception of diabetes.

Figure 2. Infant Mortality Rates, Davidson County, TN, 1990 - 2003



For the 6 leading causes of death and infant mortality for which there is a corresponding Healthy People 2010 objective, Davidson County rates fall short of the objective goal with the exception of diabetes.

Figure 3. Age-Adjusted Death Rates* by Cause, Davidson County, TN, 2003



Leading Causes of Death

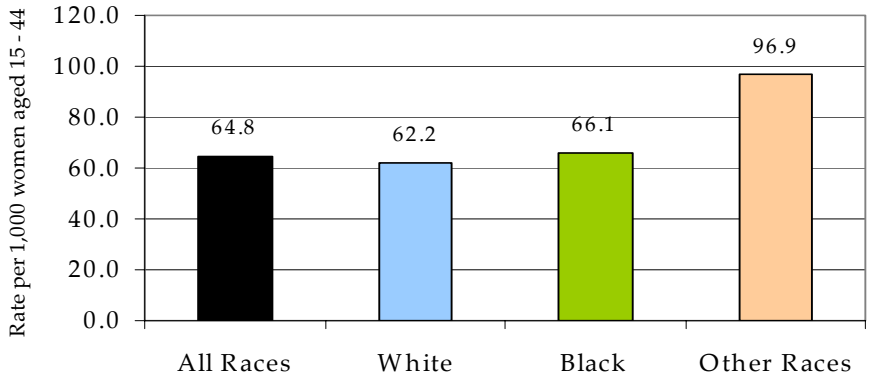
The three leading causes of death among Davidson County residents in 2003 were heart disease, cancer, and stroke. These 3 causes accounted for nearly 55% of all the deaths in the county in 2003. The other leading causes of death based on age-adjusted death rates were chronic lower respiratory diseases, accidents, Alzheimer's disease, diabetes, influenza and pneumonia, nephritis, and chronic liver disease. Males were more likely to die due to HIV-related disease, homicide, and suicide than females, while females were more likely to die from Alzheimer's disease, nephritis, and hypertension. Blacks were more likely to die due to HIV-related disease and homicide than Whites, while Whites were more likely to die due to suicide and chronic liver disease.

Selected Highlights: 2003 Natality Report for Davidson County

Births and Fertility Rates

In 2003, there were 8,900 births to Davidson County residents, with a general fertility rate of 64.8 infants born per 1,000 females aged 15 to 44 years. The White fertility rate in 2003 was 62.2, compared to 66.1 for Blacks, and 96.9 for females of other races. Females aged 15-19 had a fertility rate of 57.2, while the fertility rate for females aged 10-17 was 13.1 and 10-19 was 29.8.

Figure 1. General Fertility Rates* by Race, Davidson County, TN, 2003

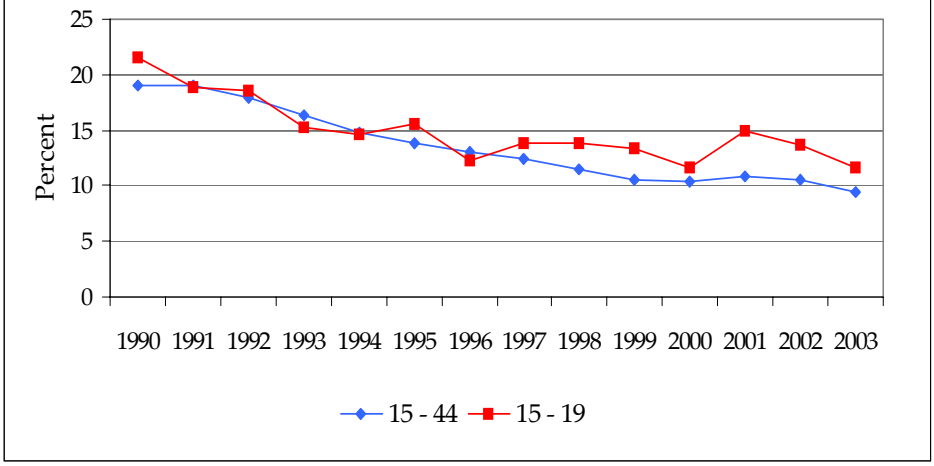


*General Fertility rate computed by relating total births, regardless of age of mother, to women aged 15 - 44 years

Marital Status

In 2003, 41.3% of all live births were to unmarried mothers. Sixty-nine percent of Black mothers, 29.2% of White mothers, and 32.7% of mothers of other races were not married at the time of delivery.

Figure 2. Percent of Women Who Smoked During Pregnancy by Age Group, Davidson County, TN, 1990 - 2003



Prenatal Care

During the year 2003, 86.5% of women with live births started prenatal care during the first trimester of pregnancy. A larger percentage of White women (88.7%) received first trimester care than Black women (83.4%) or women of other races (78.8%). Teen mothers aged 10-19 had a lower proportion of early prenatal care initiation (75.9%) than women in Davidson County as a whole (86.5%). Among this age group, a greater proportion of White females (78.2%) received first trimester prenatal care than Black females (73.2%) or females of other races (75.7%).

A higher percentage of women aged 15-19 (11.7%) smoked during pregnancy than the general population of pregnant women.

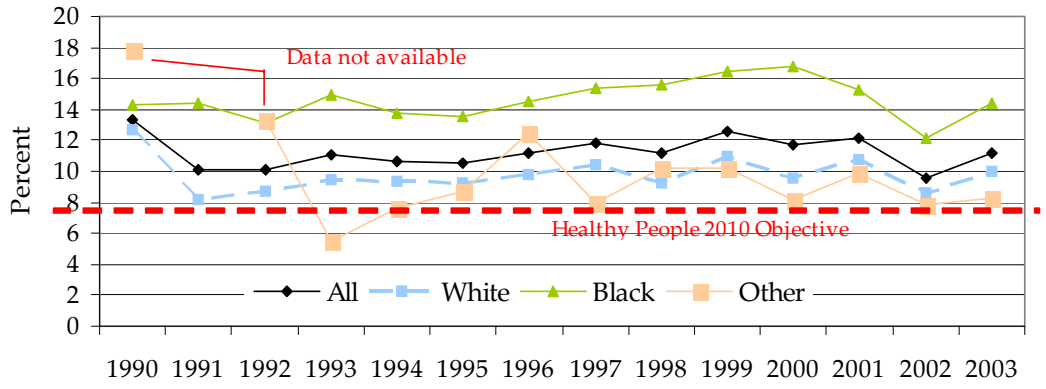
Risk Factors During Pregnancy

In 2003, 9.4% of women giving birth reported smoking during pregnancy. A higher percentage of women aged 15-19 (11.7%) smoked during pregnancy than the general population of pregnant women. A higher percentage of White birth mothers reported smoking during pregnancy than did Black or other race mothers. The respective percentages were 10.5%, 8.6%, and 2.2%. White mothers aged 15-19 had the highest percentage of smokers (16.1%), while the percentage of Black teens who smoked during pregnancy was much smaller (7.2%). Less than 1% of all birth mothers reported alcohol consumption during pregnancy.

Infant Health Characteristics

During the year 2003, 11.2% of babies born in Davidson County were born prematurely (less than 37 weeks of gestation). When examined by race, 10.0% of White babies born that year were premature compared to 14.4% of Black babies, and 8.3% of babies of other races. Similarly, 9.5 % of all live births were low birth weight (less than 2,500 grams). Of those, 7.5% of White, 13.9% of Black, and 8.3% of other race babies were born with low birth weight.

Figure 3. Percent* of Preterm Births by Race, Davidson County, TN, 1990 - 2003**



*Percent not calculated when number of births less than 10
**Born prior to 37 weeks of gestation

Davidson County falls short of the national objectives for both premature and low birth weight births.

Comparison with National Objectives

Davidson County misses the Healthy People 2010 targets for both the percent of women and teen women aged 10-19 entering prenatal care in the first trimester. Additionally, Davidson County falls short of the national objectives for both premature and low birth weight births.

Note: The complete report is available at
http://healthweb.nashville.gov/Health_d/Natality Report 2003.pdf

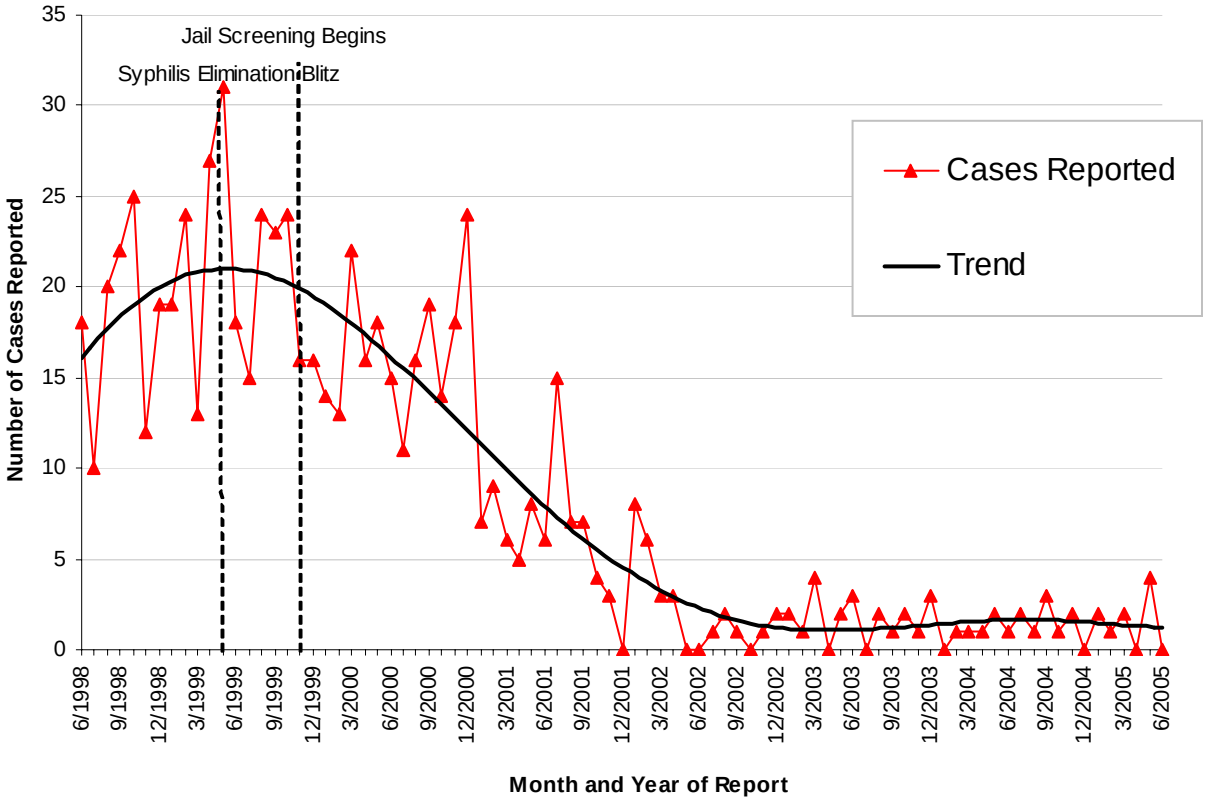
Seasons Greetings

Wishing You a Safe, Healthy, and Happy Holiday Season

Happy Holidays from the Staff of Public Health Watch

Metro Public Health Department's Syphilis Elimination Initiative

Primary and Secondary Syphilis
Cases Reported Among Davidson County Residents,
June 1998 through June 2005



Editor's Note:

In late 1998, Metro Public Health Department (MPHD) hosted a community forum to call attention to a syphilis epidemic occurring in Davidson County. (A summary of the forum can be found in the November/December 1998 issue of Public Health Watch at: **ftp://ftp.nashville.gov/web/health/web_docs/pdf_copies/volume2number4.pdf)**. From 1995 to 1996, the syphilis incidence rate had almost doubled from 18.3 to 36.1 cases per 100,000 persons. The increase continued in 1997 and the first 10 months of 1998. In 1997, Nashville's primary and secondary syphilis rate was about 12 times as high as the nation's rate and 3 times as high as Tennessee's rate. The rate increase was a reversal of a five-year decline in the primary and secondary syphilis incidence rate in Nashville and was in contrast to the nation's and state's declining syphilis trends. Nashville's relative ranking of primary and secondary syphilis incidence rate among 64 cities of more than 200,000 population in the U.S. increased from 17th highest in 1995 to 5th highest in 1996 and 3rd highest in 1997.

As a result of the forum, the Nashville community organized and worked with the MPHD's Sexually Transmitted Disease (STD) clinic and staff to address the syphilis epidemic. Since the 250 cases of primary and secondary syphilis that were reported in 1999, the number has continually declined to the 15 total cases that were reported in 2004. This is a decrease from 47 cases of primary and secondary syphilis per 100,000 population to 3 cases per 100,000 in a five year period. This issue of the *Public Health Watch* summarizes the activities that led to this decrease in primary and secondary syphilis in Nashville.

continued on page six

Metro Public Health Department's Syphilis Elimination Initiative.....Continued from page five

Metro Public Health Department's Syphilis Elimination Program

Demetria Kimbro, BS
Dan McEachern, MS
STD/HIV Prevention and Intervention

The Syphilis Epidemic in Nashville

In 1990, a total of 339 primary and secondary syphilis cases were reported to the Metro Public Health Department (MPHD) in Nashville, an incidence rate of 66 per 100,000 population. The rates remained high but steadily declined through 1995, when 97 cases were reported (18 per 100,000). In 1996 incidence increased to 193 cases, a 100% increase over the previous year. The incidence of syphilis peaked again in 1999 when 250 cases were reported (47 per 100,000). The number of cases continued to decline through 2004, when 15 cases were reported (3 per 100,000).

In 1990, a total of 339 primary and secondary syphilis cases were reported in Nashville, an incidence rate of 66 per 100,000 population.

The Syphilis Elimination Blitz

In May of 1999, the Tennessee Department of Health initiated the Nashville Syphilis Elimination Blitz to combat the rise of primary and secondary syphilis in the city. Aggressive contact and cluster elicitation, partner notification, and field investigations were conducted by the disease intervention field staff, with state and federal assistance. Clinic hours were extended to include nights and Saturdays.

The decline of primary and secondary syphilis cases in Metro Nashville was a result of combined efforts of various local, state, federal and community partners, as well as the integration of enhanced services and newly implemented strategies. As a result, Nashville has an established syphilis outbreak response plan in place that assures rapid assessment of the potential for a syphilis outbreak and can effectively coordinate a response from partners.

Improved Policies and Procedures

After the Blitz was implemented and evaluated, the Centers for Disease Control and Prevention provided Nashville with assistance in the form of direct funding and two Federal assignees: an Operations Manager and a Surveillance Supervisor. In addition to the Federal assignees, Metro Public Health Department increased the STD/HIV Program field services staff to eight.

The two federal assignees assisted in review and reorganization of existing policies and implementation of new ones. New processes and procedures put into place included:

Targeted Intervention

- A risk factor report was developed, which led to specific targeted interventions, including addition of condom demonstrations to interviews and expanded outreach to the Spanish speaking community.

Enhanced Case Management and Supervision

- Weekly meetings were held to discuss cases and exchange ideas, learn new investigative techniques, and develop new strategies for locating and motivating patients.
- Referrals were made for drug rehabilitation, food, clothing, shelter, and other basic needs when necessary.
- Audit tools enabled supervisors to monitor field activities, enhance interviewing techniques, and respond to the case load of each Disease Investigation Specialist.

Medical Protocols/Policies

- Testing and treatment were offered to suspected syphilis cases and associates, including persons in the same social network, pregnant women not seeking prenatal care, persons who trade sex for money and/or drugs, and anyone else deemed at risk through case investigation
- Every field record submitted for closure was given in-depth review.

Enhanced Systems and Communication

- Mobile phones were provided to Disease Investigation Specialists, allowing them to contact and be contacted by patients after hours.
- Enhanced computer programs were created to document statistical information that could be readily retrieved in real time.

continued on page seven

Metro Public Health Department's Syphilis Elimination Initiative.....Continued from page six

Staff Development

- Experienced Disease Investigation Specialists were sent to training updates and advanced courses.
- Newly hired Disease Investigation Specialists were exposed to every aspect of clinical services, including clerical, nursing and surveillance, as well as shadowing their experienced co-workers.

Community Partners

- Community presence was enhanced by extensive outreach activities. Community partners including the faith community, barber shops and beauty salons, drug treatment centers, middle and high schools, universities, neighborhood businesses, restaurants and bars worked with MPHD to disseminate educational materials.

Jail Syphilis Screening Program

Individuals who engage in behaviors such as drug use, multiple sex partners, and trading sex for money or drugs, are at high risk both for incarceration and for contracting syphilis. The Division of Epidemiology initiated a study in 1998 involving inmates who had been incarcerated at the Criminal Justice Center (CJC) on sex and drug related charges. A high correlation was found between sex and drug related arrests and reported syphilis cases.

A high correlation was found between sex and drug related arrests and reported syphilis cases.

The CJC Syphilis Screening Project was begun on November 1, 1999, with monies awarded to Metro Public Health Department (MPHD) by the Centers for Disease Control and Prevention (CDC) as part of the Syphilis Elimination Initiative.

At that time, MPHD subcontracted with Prison Health Services to provide syphilis screening for all booked inmates at the CJC.

Half of all inmates of local jails are released within 48 hours of booking. In order to treat infected inmates before their return to the community, inmates had to be tested and results reported promptly. MPHD staff delivered blood specimens to the State Department of Health Central Laboratory twice each day, seven days a week. The lab processed the specimens as soon as they arrived and called the CJC with positive results within hours of receiving them.

This project showed results immediately. In 2000, the majority of newly identified early syphilis cases were a result of the CJC screening. In 2001 reported primary and secondary syphilis cases began to decline, and this trend has continued until the present.

The full reports, *Epidemiology of Primary and Secondary Syphilis in Nashville and Davidson County, Tennessee, Preliminary Findings* and *Primary and Secondary Syphilis in Nashville and Davidson County, TN: 1996-1999 Epidemic Risk Factors Examined* are available on the Metro Public Health Department website at **http://healthweb.nashville.gov/recntpub.html**

For more information on the Nashville syphilis epidemic and jail screening program:

Huang J, Rogers WB, Bailey SB. Primary and secondary syphilis in the metropolitan area of Nashville and Davidson County, Tennessee: 1996 to 1998 epidemic described. *Sex Transm Dis*. 2000:27(3): 168-74.

Rogers, WB, Siegenthaler CP. Correctional health care as a vital part of community health. *J Ambul Care Manage. 2001:24(3): 45-51*

STD FREE! Coalition Continues Service to the Nashville Community

Lynette Whitlow, MS

STD Free! is a community-based organization providing a variety of sexually transmitted disease (STD) prevention services including education, training, awareness, and STD testing information to the Nashville community. The organization's vision is: **All Davidson County Communities…STD Free!**

STD Free! maintains a coalition of community-based organizations and individuals committed to partnership and the goals of the initiative.

How STD Free! Began:

STD Free! was the first project initiated by the Metro Public Health Department's Community Health Action Team (CHAT) in November 1998. Initially, there were five workgroups conducting syphilis elimination projects at the neighborhood level. Some of the activities completed by these community workgroups included a non-denominational Faith Symposium, a Community Forum and Blitz, and hosting the nationally traveling Faces of AIDS awareness exhibit. STD Free! continues to provide prevention services at the community level. However, as syphilis morbidity decreased in Nashville, STD Free's focus broadened to include an emphasis on other sexually transmitted diseases.

Program Transition:

In late 2004, the STD Free! program transitioned out of the Metro Public Health Department (MPHD) and into the community as an incorporated, free-standing, tax-exempt entity. The organization maintains a close collaborative relationship with the Metro Public Health Department through prevention planning, on-going community testing collaborations, and MPHD staff liaisons who are members of the STD Free! coalition.

STD Free! Annual and Semi-Annual Activities include:

Train the Trainer

National HIV Testing Day

STD FREE! Haunted House Project

Valentine's Day Blitz

Prom Promise

World AIDS Day

Spring Break Safe Pack Project and Others

STD Free! 2005 Projects:

Although 2005 is a planning year for the organization, the STD Free! coalition presented the annual National HIV Testing Day event on Friday, June 24th, 2005 in collaboration with the STD/HIV clinic and the March of Dimes CHOICES Program (MPHD Family, Youth, and Infant Health Services Division). This year's HIV Testing Day theme was "Get Healthy, Get Answers, GET TESTED!" and included music, food, and entertainment. In addition to chlamydia and gonorrhea testing, MPHD staff tested over 100 individuals for HIV and syphilis at the activity.

Nashville approached the 1998 syphilis epidemic with bold, comprehensive solutions. The collaborative success earned the Metro Public Health Department, the STD/HIV Clinic and STD Free! praise for excellence and recognition as a national model in public health practice.

The STD Free! Offices are located in Metro Center in the Corner's Building at 621 Mainstream Drive, Suite 270. The phone number for STD Free! is 297-0STD.

www.stdfree.org

"Are YOU STD Free?.....Are you *Sure*?"

Results of Immunization Survey Conducted in Nashville, Davidson County, Tennessee

Kathryn Edwards, MD
Vanderbilt University

In February 2000, 7-valent pneumococcal conjugate vaccine (PCV7) was licensed and recommended for all children less than 2 years of age and for high risk children 2-4 years of age. With the incorporation of PCV7 into the already complicated vaccination schedule at 2 months, 4 months, 6 months, and 15 to 18 months of age, there was concern that vaccination rates for other vaccines would decline.

Table 1
Impact of PCV7 on Other Vaccinations
Median Number of Days Receipt

	Nashville	
	Cohort #1	Cohort #2
DTaP1	63	62
DTaP2	126	126
DTaP3	190	188
DTaP4	486	470
Polio1	63	62
Polio2	126	126
Polio3	452	386
MCV (MMR)	396	386
Hib1	63	62
Hib2	126	126
Hib3	194	191

The Centers for Disease Control and Prevention (CDC) funded a study in Davidson County to assess whether routine immunization rates were lower when PCV7 was added to the vaccine schedule. Nurses visited the offices and clinics of county physicians and health care centers to determine the immunization rates for vaccines routinely administered.

As can be seen in Table 1, the mean time for receipt of routine vaccines did not change from Cohort 1 (the pre-PCV7 vaccination time) to Cohort 2 (the post-PCV7 vaccination time), indicating that PCV7 was incorporated into the vaccine schedule without any disruption to the previous schedule.

Table 2
Impact of PCV7 on Total Visits
(Did PCV7 cause more visits?)

Visit Type	Age	Nashville	
		Cohort #1	Cohort #2
Mean # of WCC Visits	0-6m	3.144	3.113
	7-12m	1.390	1.364
	13-18m	0.996	0.987
Mean # of Other Visits	0-6m	2.757	2.759
	7-12m	2.266	2.290
	13-18m	2.430	2.249

Another question that was answered by this survey is whether additional visits were required to administer the PCV7. As seen in Table 2, there was no increase in the total number of visits required to complete the vaccination series.

For additional information about this study, please contact: kathryn.edwards@Vanderbilt.Edu

Reported cases of selected notifiable diseases for September/October 2005

Disease	Cases Reported in Sept/Oct		Cumulative Cases Reported through October	
	2004	2005	2004	2005
AIDS	32	47	230	230
Campylobacteriosis	8	2	32	29
Chlamydia	362	not available	2,083	not available
DRSP (Invasive drug-resistant *Streptococcus pneumoniae*)	7	1	7	1
Escherichia coli 0157:H7	1	4	4	3
Giardiasis	15	2	43	30
Gonorrhea	189	not available	964	not available
Hepatitis A	6	0	19	21
Hepatitis B (acute)	0	0	17	16
Hepatitis B (perinatal)	3	1	36	1
HIV	57	55	265	268
Influenza-like Illness	0	54	184	1,399
Neisseria meningitidis disease	0	1	1	3
Salmonellosis	7	9	51	60
Shigellosis	4	3	16	253
Syphilis (primary and secondary)	4	not available	13	not available
Tuberculosis	9	10	43	55
VRE (Vancomycin-resistant enterococci)	0	0	23	218

To report a notifiable disease, please contact:

Sexually transmitted diseases: Brad Beasley at 340-5676
AIDS/HIV: Mary Angel-Beckner at 340-5330
Hepatitis B: Denise Stratz at 340-2174
Tuberculosis: Alisa Haushalter at 340-5650
Hepatitis C: Pat Sanders at 340-5632
Vaccine-preventable diseases: Mary Fowler at 340-2168
For all other notifiable diseases, please contact: Pam Trotter at 340-5632

Metro Public Health Department
Line Of Business: Epidemiology
311 23rd Avenue North
Nashville, TN 37203

Return Service Requested

Public Health Watch welcomes feedback, articles, letters, and suggestions. To communicate with ***Public Health Watch*** staff, please:

Telephone: (615) 340-2141
Fax: (615) 340-2292
E-mail: karen.grimm@nashville.gov